

REMARKS

In view of the following remarks, the Examiner is requested to allow Claims 1-9 and 33-38, the only claims pending and under examination in this application.

In the above amendments, the wording of the claims has been modified but only to clarify the claimed subject matter. It is submitted that the above amendments introduce no new matter and their entry by the Examiner is respectfully requested.

Claim Rejections - 35 USC § 102(e)

In the Advisory Action, the Examiner continued to reject claims 1-7 and 9 under 35 USC § 102(e) as being anticipated by Cronin et al. (U.S. Patent No. 6,027,880, issued February 22, 2000, filed October 10, 1995, priority October 26, 1993).

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Applicants submit that Cronin et al. fail to disclose each and every element as set forth in claim 1. Specifically, Cronin et al. fail to disclose a method of synthesis wherein degenerate biopolymers are formed at particular feature locations by providing a mixture of biopolymer subunit precursors at particular feature locations.

In light of the remarks presented above, applicants respectfully request withdrawal of the rejection under 35 USC § 102(e) of claims 1-7 and 9.

Claim Rejections - 35 USC § 103(a)

The Examiner has rejected claim 8 under 35 USC § 103(a) as being obvious over Cronin et al. (U.S. Patent No. 6,027,880) in view of Baldeschwieler et al. (WO 95/25116, published September 21, 1995).

As discussed previously, Cronin et al. fails to teach or suggest at least the following element of claim 4: a method of synthesis wherein a mixture of biopolymer subunit precursors is provided at a feature location to form a feature location comprising degenerate biopolymers. Since the Baldeschwieler et al. reference is relied upon solely for its disclosure of a method of synthesizing an array via use of inkjet technology, and not for any disclosure related to mixtures of biopolymer subunit precursors, it fails to make up for the deficiencies in the Cronin et al. reference.

As such, Applicants submit that the references when combined fail to teach or suggest all the limitations of claim 8. For this reason, Applicants submit that a *prima facie* case of obviousness has not been established and respectfully request withdrawal of the rejection.

The Examiner has rejected claims 1-9 and 33-38 under 35 USC § 103(a) as being obvious over Hanks et al. (Methods in Enzymology, 1991, vol. 200, pages 525-532) in view of Baldeswieler et al. The Examiner stated that Hanks et al. disclose a method of using degenerate oligonucleotide probes so as to identify clones that encode protein kinases. According to the Examiner it would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to fabricate a microarray comprising a plurality of degenerate oligonucleotide probes for the well known benefit of simultaneously identifying a plurality of homologous genes of interest.

As discussed previously, each of claims 1-9 have as an element a method of synthesis wherein a mixture of biopolymer subunit precursors is provided at a feature location to form a feature location comprising degenerate biopolymers.

While the Examiner suggests that Hanks et al. explicitly disclose that degenerate oligonucleotide probes are employed in a hybridization assay, the Examiner has not specified that Hanks et al. disclose a method of synthesis wherein a mixture of biopolymer subunit precursors is provided at a feature location to form a feature location comprising degenerate biopolymers. Since the Baldeschwieler et al.

reference is relied upon solely for its disclosure of a method of synthesizing an array via use of inkjet technology, and not for any disclosure related to mixtures of biopolymer subunit precursors, it fails to make up for the deficiencies in the Hanks et al. reference. As such, the references fail to teach or suggest all of the claim limitations. For this reason, Applicants respectfully request withdrawal of the rejection.

Claim 33 recites the element of "dispensing from a dispensing system said biopolymer subunit precursors to said discrete sites wherein, for one or more of said feature locations comprising said degenerate biopolymers, a mixture comprising a predetermined ratio of said biopolymer subunit precursors for forming said degenerate biopolymers is dispensed in a droplet manner at each of said feature locations comprising said degenerate biopolymers."

The argument presented in response to the rejection of claims 1-9 above applies *a fortiori* to the rejection of claim 33. As discussed above, the Examiner has not specified that Hanks et al. disclose a method of synthesis wherein a mixture of biopolymer subunit precursors is provided at a feature location to form a feature location comprising degenerate biopolymers, much less a mixture comprising a predetermined ratio of said biopolymer subunit precursors for forming said degenerate biopolymers. As the Baldeschwieler et al. reference is relied upon solely for its disclosure of a method of synthesizing an array via use of inkjet technology, and not for any disclosure related to mixtures of biopolymer subunit precursors, it fails to make up for the further deficiencies in the Hanks et al. reference.

Claims 34-38 each depend from claim 33 and are, therefore, patentable over Hanks et al. in view of Baldeschwieler et al. by virtue of such dependency since claim 33 is patentable over the references as discussed.

As part of the rejection of claims 1-9 and 33-38 under 35 USC § 103(a), the Examiner stated that Applicants' definition of the term "mixture" does not exclude a plurality of same nucleotides, and that the instant claims encompass such an embodiment.

Applicants submit that, based on the plain meaning of the term "mixture", one of ordinary skill in the art would understand the term to mean at least two different biopolymer subunit precursors in this context. By way of example, Applicants direct the Examiner's attention to the following definitions of the term mixture:

- a) "a portion of matter consisting of two or more components in varying proportions that retain their own properties" (Merriam Webster Online Dictionary, www.merriamwebster.com)
- b) "a combination of several different kinds" (Merriam Webster Online Dictionary, www.merriamwebster.com)
- c) "The word *mixture* is used to describe a gaseous or liquid or solid phase containing more than one substance, when the substances are all treated in the same way . . ." (CRC Handbook of Chemistry and Physics, CRC Press, Inc. (1983)).

Based on these definitions, and the general understanding of one of ordinary skill in the art, Applicants submit that the term "mixture" does exclude a plurality of same nucleotides. The Examiner has not indicated that either Hanks et al. or Baldeswieler et al. teach or suggest a "mixture" of biopolymer subunit precursors as so defined. As such, the Examiner has not shown that the prior art reference, or references when combined, teach or suggest all the claim limitations.

Applicants submit that based on the above a prima facie case of obviousness has not been established. For this reason, Applicants respectfully request withdrawal of the rejection.

CONCLUSION

In view of the remarks above, the Applicants respectfully submit that all of the claims are in condition for allowance, which action is requested. If the Examiner finds that a telephone conference would expedite the prosecution of this application, please telephone Bret Field at (650) 327-3400.

The Commissioner is hereby authorized to charge any fees under 37 C.F.R. §§ 1.16 and 1.17 which may be required by this paper, or to credit any overpayment, to Deposit Account No. AGILENT 50-1078, order number 10030511-1.

Respectfully submitted,

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By: 

Bret E. Field
Registration No. 37,620

AGILENT TECHNOLOGIES, INC.
Legal Department, DL429
Intellectual Property Administration
P.O. Box 7599
Loveland, CO 80537-0599

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